

## Multiple Choice Questions

1. Myocardial infarction in Covid-19 should be treated with which combination of medications (Choose one):
  - a. Aspirin, abciximab, Simvastatin
  - b. Aspirin, Clopidogrel, Atorvastatin
  - c. Aspirin, Clopidogrel, low molecular weight heparin, Atorvastatin
  - d. Ticagrelor, Alteplase, low molecular weight heparin
  - e. Prasugrel, Atorvastatin, Ramipril
2. Patients with Covid-19 who develop ST Elevation Myocardial Infarction should have (choose one):
  - a. Thrombolysis with Alteplase or Tenecteplase
  - b. Conservative therapy with Aspirin and opiates
  - c. Primary percutaneous angioplasty
  - d. Medical therapy alone
  - e. Careful assessment with treatment chosen according to clinical scenario
3. The maximum delay for primary angioplasty for STEMI from the time of diagnosis should be (Choose one):
  - a. 90 minutes
  - b. 120 minutes
  - c. 30 minutes
  - d. 180 minutes
  - e. 360 minutes
4. Full personal protective equipment (PPE) should be worn in which of the following circumstances:
  - a. Travelling to work
  - b. During remote telemedicine clinics
  - c. Primary angioplasty for myocardial infarction
  - d. While working in clean zones
  - e. Elective angiography in swab-negative patients without fever
5. A patient with NSTEMI with ST depression on an ECG, rising troponin and confirmed Covid-19 should:
  - a. Have invasive management according to clinical risk scores
  - b. Have invasive management deferred until Covid-19 negative
  - c. Have Cardiac MRI assessment for viability
  - d. Have medical management only
  - e. Have bypass surgery

**Answers.**

1. C is the optimal answer. The combination of antiplatelet therapy, statin therapy and heparin remain the mainstay of treatment. Option B is less optimal because it does not include low molecular weight heparin. A is not optimal as Abciximab and other GPIIb/IIIa antagonists should be utilised only if there is a significant clot burden; a second potent thienopyridine is not given in this option. Option D combines ticagrelor, a potent thienopyridine, but no aspirin. Thrombolytics are generally given with clopidogrel to reduce the bleeding risk. Option E does not include aspirin or heparin.
2. E is the optimal answer. UK practice has been to maintain full primary angioplasty services (PPCI). However, this may not be applicable in all cases. All STEMI cases should be assessed in the normal manner and, if appropriate, PPCI (option C) should be offered to the patient. In some patients, with significant co-morbidity or poor prognosis, option B or D may be considered. Option A should be offered if PPCI is not available or not feasible in a safe manner.
3. B is the recommended answer. PPCI should be performed within 120 minutes of the diagnosis. Where possible, PPCI should be performed within 60 minutes of arrival at a cardiac centre.
4. C is the optimal answer. Full PPE should be utilised for patients undergoing PPCI. Full PPE should also be worn during echocardiography and during face to face care of those with confirmed Covid-19. During cardiac arrest, full PPE is required by all those involved in resuscitation. Full PPE is not required during travel but face-masks may be appropriate and in keeping with current government instructions if utilising public transport. The use of goggles and protective overalls are not currently recommended. Full PPE is not required during remote telemedicine clinics or working in Covid-protected zones. Swab-negative patients require less precautions and individual units may suggest simple surgical masks only.
5. A is the optimal answer. A patient with a rising troponin and high risk ECG features should be offered invasive management according to GRACE score and other clinical metrics. Those with high risk features have the highest to gain. Option B is less optimal as question already states clinical features that suggest deferral would be a less safe option. Option C is less optimal as unnecessary testing should be avoided to reduce extraneous usage of resources. Option D is less optimal as option A is more appropriate for a higher risk case. Option E is less optimal because cardiopulmonary bypass while actively infected with Covid-19 is associated with a high mortality. Alternative revascularisation options should be discussed in a multi-disciplinary manner.